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EXAMINER

WILDER, PETER C

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/855,424

Applicant(s)

HORNSBY ET AL.

Examiner

Peter C. Wilder

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-9 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-9 and 20-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/15/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1,3, 5-9, and 20-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Williams (U.S. 5745836).

Referring to claim 20, Williams teaches a method of communicating data signals, comprising the steps of:

transmitting data signals to a two-conductor medium (Figure 1 elements 108, and 110 and Column 8 lines 30-33 teach a coax cable) through bandpass transmit filters (Figure 1 element 125 transmits a signal to Figure 4 element 403, and Figure 4 element 404 transmits a signal to Figure 1 element 126) having different passbands (Column 8 lines 35-39 teaches elements 125 and 126 are a high and low pass filter respectively which are both the same as a band pass filters since they restrict the frequency ranges, Column 14 lines 12-15 teach the filter 404 is a low pass filter and Column 13 lines 8-9 teach element 403 is a high-

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pass filter) that each define a respective one of different communication channels in the frequency region below 1000 megahertz (Figure 1 element 125 is for transmitting in down stream communications and Figure 4 element 404 is for transmitting in upstream communications, Column 8 lines 18-22 teaches forward path or downstream signal is between 54-750 MHz and the upstream/return path is between 5-40 MHz these frequencies are all below 1000 Megahertz); and

receiving data signals from said medium through a plurality of band pass receive filters each of whose passbands substantially matches the passband of a respective one of said transmit filters (Figure 1 teaches element 126 a low pass filter that receives a return signal and Figure 4 element 403 a filter receives a downstream signal also, Figure 1 element 125's passband matches Figure 4 element 403's passband, and Figure 4 element 404's passband matches Figure 1 element 126's passband).

Referring to claim 21, depending on claim 20, Williams teaches amplifying said data signals prior to said transmitting step (Referring to Figure 1 the examiner reads the transmission step of distribution onto coax cables occurs at element 132 which is an amplifier).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (U.S. 5255267) in view of Marston ("Electronic Circuits Pocket Book") further in view of Samueli et al. (U.S. RE37826 E).

Referring to claim 1, Hansen teaches a data communication system (Figure 2), comprising:

A two-conductor medium (Column 2 lines 8-12);

A plurality of transceivers (Figure 2 elements 22 along with a PC connected to port 50 according to Column 3 lines 4-7 and a television connected to port 54 according to Column 2 lines 9-12); and

Sets of filters (Figure 4 elements 52 and 54 which are filters in devices/taps elements 22 in Figure 2) wherein:

b) each of said transceivers includes a filter of each of said sets to facilitate transmission of data signals through that filter to said medium (Column 3 lines 4-7 teaches a computer coupled to the medium 12 at port 42; Figure 4 teaches the left most element 52 a filter which is coupled to the computer port element 50, the computers in the network in Figure 2 transmit signals to each other Column 2 lines 26-30); and

c) each of said transceivers includes receivers (Figure 2 element 22 has a television connected to it) and includes a filter of each of said sets that couples a

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respective one of said receivers to said medium to facilitate reception through that filter of said data signals from said medium (Column 3 lines 9-12 and Figure 4 teaches a transceiver that has element 54 a filter for broadband signals for a television, Also a computer is a receiver connected to port 50 as mentioned above);

each of said sets thereby defining a respective one of different communication channels for communicating said data signals over said system (Column 4 lines 43-56 teaches the tap inputs different signals broadband and baseband signals which operate at different channel frequencies).

Hansen fails to teach a) the filters of each set are configured to define a respective one of a plurality of different passbands, and amplifiers connected to the transmission medium and computer.

Marston teaches a) the filters of each set are configured to define a respective one of a plurality of different passbands (On pages 105-107 the concept of high and low pass filters are taught with their respective equations and when combined as shown in figure 5.5 on page 107 a bandpass/passband filter is created, the adjustments of the resistors and capacitors allow the frequency range of the bandpass filter to be adjusted to any range desired).

At the time the invention was made it would have been obvious for one skilled in the art to modify the data communication system of Hansen using the bandpass filter teachings of Marston for the purpose of rejecting unwanted frequencies and passing only the desired frequencies (Page 105 first sentence under "Passive C-R circuits", Marston).

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Hansen and Marston fail to teach amplifiers connected to the transmission medium and computer.

Samueli teaches amplifiers connected to the transmission medium and computer (Figure 1 teaches a hub and Ethernet network; Figure 2 element 32 and Column 26-29 element 32 teach an amplifier at the computer which transmits a signal on an Ethernet line according to Column 3 lines 21-25, The amplifier would be implemented at the output of the computer before the input connector element 50 in Hansen)

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined system of Hansen and Marston using the amplifying system of Samueli for the purpose of amplifying the signal to make sure the signal is not lost due to resistance in the communication line.

Referring to claim 3, depending on claim 1, Hansen teaches wherein each of said transceivers further includes a combiner inserted between said amplifier and said filter of each of said sets (Figure 4 teaches the intersection/combiner of signals coming from connection 44 and a signal coming from the computer connected to element 50 just to the right of said filter (left most LPF), the connection is between the computer connection with the amplifier and the said filter).

Referring to claim 5, depending on claim 1, Hansen teaches wherein each of said passbands lies in the frequency region below 1000 megahertz (Column 3

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lines 55-67 and Column 4 lines 1-56 teach the frequency ranges for the system which all fall below 1000 megahertz).

Referring to claim 6, depending on claim 1, Hansen and Marston teach wherein each of said passbands has a width that does not substantially exceed 10 megahertz (Hansen teaches in Column 5 lines 65-67 the spectrum for the broadband or high pass filter has to include any frequencies ranging from 50-350 MHz and Column 3 lines 9-12 teach the HPF is frequency is set at 35 MHz; The LPF for the baseband frequencies has to range from 0-25MHz according to the chart and Column 3 lines 29-32 teaches LPF is set at 35 MHz; Marston teaches on pages 105-107 how a bandpass filter works and how to set the frequency ranges for a bandpass filter to include the necessary frequency spectrum desired, thus a bandpass filter can replace the high and low pass filters respectively and the range on the filters can include the spectrum ranges set by Hansen, the ranges 50-350 and 0-35 MHz for the filters do not substantially exceed 10 megahertz).

(Column 3 lines 29-32 teach LPF is below 35 MHz which gives it a max range between 0-35 MHz and the Column 3 lines 9-12 teach the HPF is frequencies from 35 MHz to infinite, neither filter substantially exceeds a 10 megahertz bandpass).

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Referring to claim 7, depending on claim 1, Hansen teaches wherein said two-conductor medium is a coaxial cable (Column 2 lines 8-10 and Figure 2 elements 12).

Referring to claim 8, depending on claim 1, Hansen teaches wherein said two-conductor medium is a twisted pair (Column 2 lines 10-12 and Figure 2 elements 12).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (U.S. 5255267) in view of Marston ("Electronic Circuits Pocket Book") further in view of Samuelli et al. (U.S. RE37826 E) further in view of Newton's Telecom Dictionary.

Referring to claim 9, depending on claim 1, Hansen teaches wherein said medium comprises a plurality of medium branches and further includes at least one hub transceiver that couples said branches together (Figure 2 teaches element 24 a bridge).

Hansen, Marston, and Samuelli fail to teach amplifies said data signals.

Newton teaches amplifies said data signals (Page 115 and 116 teach a bridge includes an amplifier).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Hansen, Marston, and Samuelli using the bridge amplifying system of Newton for the purpose of

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amplifying the signal to compensate for loss of signal strength incurred as the signal is split across the bridge segments (Page 116 Column 1 lines 1-4, Newton).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (U.S. 5745836) in view of Chen et al. (U.S. 6782884 B1).

Referring to claim 22, depending on claim 20, Williams teaches said two-conductor medium is a cable network that forms branches (Figure 1 element 110 through nodes 170 and 171 and so on).

Williams fails to teach the step of amplifying said data signals as they pass between said cable branches.

Chen teaches the step of amplifying said data signals as they pass between said cable branches (Figure 1 elements 124, 122, and 118 are nodes/taps and Figure 2a teaches amplifiers between the nodes/taps and Column 2 lines 18-25).

At the time the invention was made it would have been obvious for one skilled in the art to modify the signal distribution system of Williams using the amplification system of Chen for the purpose of amplifying the signal which prevents the signal from being lost due to resistance in a transmission medium (Column 2 lines 21-22, Chen).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. Wilder whose telephone number is 571-272-2826. The examiner can normally be reached on 8 AM - 4PM Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571)272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PW


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